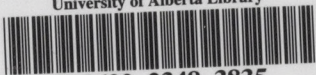


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NOR' WEST MINER

EDMONTON, ALBERTA

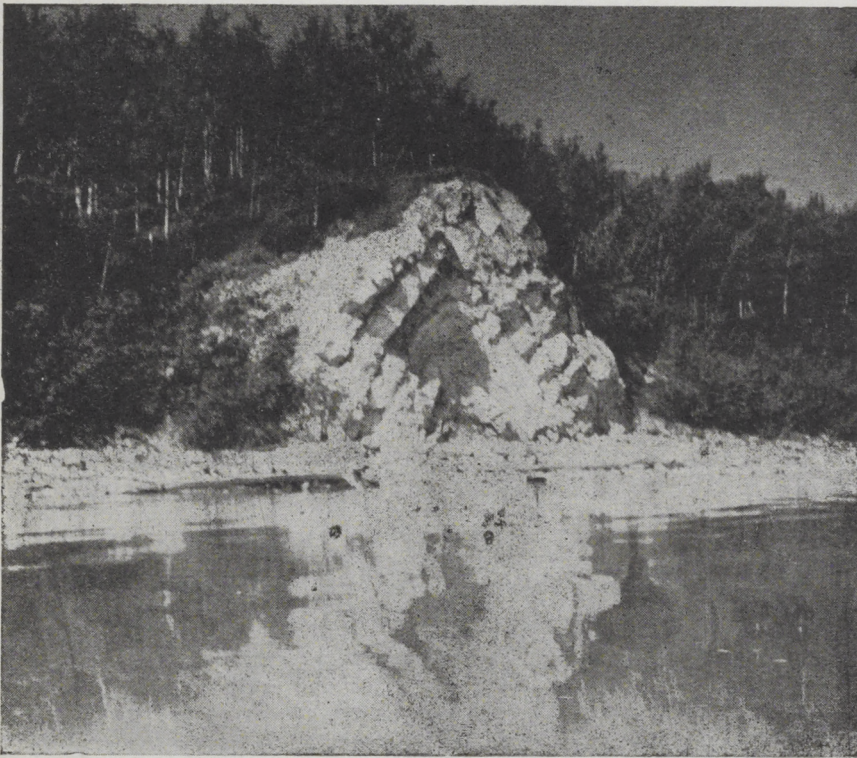
Devoted to development descriptive of the North West Territories. Northern British Columbia and the Yukon. Along the trail of the Alaska Highway. Published at Edmonton, Alberta—"The Gateway to the Far North and Alaska."

Vol. XI
No. 2

MAY
1943

"WINGS OVER THE NORTH" FORECAST NEW ERA OF DEVELOPMENT . . .

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EDMONTON, ALBERTA

THE NOR' WEST MINER

(EDITOR—F. S. WRIGHT)

Devoted to development descriptive of the North West Territories, Northern British Columbia and the Yukon. Along the trail of the Alaska Highway.
Published at Edmonton, Alberta—"The Gateway to the Far North and Alaska."

SAYS THE MINER . . .

After years of experimenting, the Dominion Government has decided to endeavour to devise some method of extracting oil from Alberta Bituminous sands on a commercial basis.

With that end in view it has taken over the plant of Abasand Oils Ltd. and will expend some \$500,000 in experimenting still further.

The consensus of opinion in regard to extraction of commercial oils from Alberta Sands is not very encouraging having regard to the opinion of those who have conducted much research into the possibilities.

Perhaps the most experienced oilman in that connection who was interested in Alberta sands is Mr. Thomas Draper of Petrolia and Port Huron, Michigan. Mr. Draper expended much money in endeavouring to find out the commercial possibilities of tar sand uses, and after experimenting with oil extraction, etc., fell back on the use of these sands in a natural state for road surfacing. He illustrated the value of such in a practical manner by actually laying miles of road and sidewalks in Alberta and those projects after years of use stand as a real object lesson of how such sands can be used at a profit.

His work shows that these sands are ideal for surfacing, will stand up under traffic, require little maintenance or repair and can be laid on an inexpensive gravel base as compared with expensive concrete bases. He discovered, in fact, that the use of concrete as a base was not practicable in countries where extremes of temperatures occur owing to heaving and cracking through frost, etc.

He found as far as oil extraction was concerned that any process usable for that purpose was too expensive for commercial use.

It is as well to remember that the presence of these exposed sands along the Athabasca River indicate, according to experienced engineering opinion, the presence of a large undeveloped oil deposit somewhere between Pouce Coupe and Waterways along the Peace. As one engineer of repute stated in 1929 — "Give me fourteen geological survey parties for a season and I would spot the place where that oil can be tapped." If the Dominion Government is anxious to obtain much needed oil from this field it is suggested that the concentration on the discovery of such oil deposits is today of more immediate importance than the theoretical experimenting with Alberta Bituminous sands.

If the Minister of Munitions takes the trouble to look up the reports of Mr. Ells, Dominion Government engineer for many years engaged in experiments, or those of Professor Clarke of the University of Alberta, he would no doubt get much information to show the impracticability of commercial extraction of oil from these deposits as compared with the prospect of finding flowing oil in the same district.

* * *

OIL IS NEEDED NOW

Oil production from Tar Sands is very indefinite. Prospecting and drilling of new wells in the North is a definite way to get more oil. In addition a suitable road surfacing material is urgently required for surfacing the Alaska Highway, other northern roads and even the roads within the Province of Alberta both Government and urban. Tar Sands can be shipped, as mined, economically to points within 200 miles truck haul from end of water or rail transportation.

AN ECONOMIC STUDY OF THE NORTH

A great era of development faces the huge Hinterlands of the North—if action follows the conclusions the International Committee appointed for this purpose are bound to arrive at. It means a new Canada in the making.

Canada and the United States will co-operate, it is announced, in making an intensive study of the possibilities for development in Alaska, Yukon, British Columbia, North West Territories. It is also announced that Northern Alberta will be included in this attempt to plan for post war development of this huge territory, which at the present time contains only around 100,000 people in over a million square miles.

The question of communication, previously the main reason for non-development has now been overcome by reason of the building of the Alaska Highway, tributary roads to that highway from points both north east and west, and the establishment of a chain of airfields north west and south east, with others serving outlying points in this territory.

To old timers, who years ago, packed over parts of this territory looking for gold, mineral, fur and oil, this announcement comes as a vindication of their efforts in past years. Many a mineral source of importance will be rediscovered. Many a valley will have farming settlement. Timber lands its mills, Lakes a fishing industry. Coal and oil lands of untold value are there for the taking.

Its a big program—that which is being undertaken — a program that needs the information and knowledge of many of these old timers who are fast disappearing from the north west and no council of Government officials should neglect this real source of information.

Of course a lot of this territory will be found to be of little economic value but there still remains much to be investigated—Oil structures on the Mackenzie River—Anthracite coal in the Groundhog country 126 miles North East of Stewart, B. C. where the best steam coal in the world awaits development — Hematite iron—coking coal on the Skeena near Kitselas and Telkwa. The placers of the upper

Naas, the Stikine, the Klappan and others rivers. The bauxite on the Liard, also placers, copper and other base minerals. The Pre-Cambrian contact on the Mackenzie River, hardly scratched at the present time. The possibilities of the Peel, the Firth and other rivers running into the Mackenzie from the Rockies. The Bell and the Porcupine with its easy route from the Mackenzie to The Yukon, and many other possibilities too numerous to mention.

And what of Northern Alberta—Farming lands, timber, water powers, coal and other mineral are available along the Northern Peace and Findlay Rivers. In the North Eastern part of the Province there is a belt of over 10,000 square miles of mineralized area, which excepting for a few scouting prospectors, has not been touched.

Oil indications exist in such quantities as to justify the suggestion recently made by a well known oil expert, who is said to have stated that this territory contains more oil structures than any other part of the world. Is he correct? If one travels down the Peace River from Peace River Crossing to Fitzgerald, for many miles gas wells, relics of old drillings, are still burning, timbers are bleached white from the sulphur fumes. Down the Athabasca River, it is not necessary to light a camp fire for cooking purposes. In many places gas bubbles up through the beaches and all one has to do is touch a match to a gas hole and use it as a burner for cooking. When experimental drilling was done at the Pelican Rapids by Dominion Government oil prospectors, the surge of gas from the drill hole was so great as to hoist drill and derrick up into the air with stones coming out of the hole drilled like rifle bullets. Again tar seepages occur at hundreds of spots along both the Peace and the Athabasca winding up with the huge tar sand deposits at McMurray and north from there.

Hay River has its oil formation—so has the west shore of Great Slave Lake, totally different as to formation from the east and north shores where the Pre Cambrian outcropping occurs. This huge lake with its thousands of square miles of water studded with thousands of islands is a regular glory hole of mineral possibility. To date the only part which has been touched has been the Yellowknife and here, in less than five years, three or more major producing gold mines have been established. The nickel, lead, zinc, deposit at Dawson Point is said to be of huge extent. In addition along the Buffalo River towards Fort Smith Smith much mineralization exists.

This is only part of the story. There are still more miles of untouched and unknown territory.

And as to agricultural possibilities. On the Peel River, which is 75 miles from the Arctic Ocean, anyone who wants to can get hundreds and hundreds of pounds of small fruits, raspberries, red currant, black currant,

strawberry and other berries. In addition the whole Mackenzie Valley, some 400 miles wide and 1000 miles long, has many bottom lands capable of producing almost any kind of vegetable and grain that at present is grown in the more southern parts of north western Canada. Yes, they grow potatoes as far north as Good Hope—vegetation, with long summer days—can almost be seen to grow. Planted in June, it is harvested in August, the 24 hour growing period making this possible.

The Economic study, must perforce have a real task ahead, if full advantage is to be taken of this great New Northland for future post war use. Few people realize that as far as western Canadian development is concerned, the only part which has even been partly developed is not more than a strip 500 miles wide running east and west along the International boundary line. To the north of this is the real west and north extending some 1700 miles north to the Arctic.

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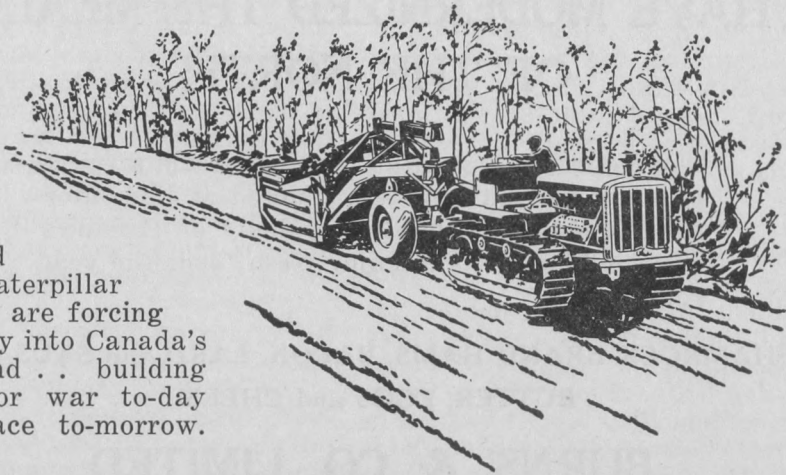
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BRITISH COLUMBIA MINING LAWS

In view of the expected prospecting activity that will arise adjacent to the route of the Alaska Highway, the following synopsis of B.C. mining laws may be of interest. British Columbia has the most up to date mining regulations of any province in Canada.

Free Miners Certifictes cost \$5 for the individual, \$100 for joint stock company if capitalized at over \$100,000, if capitalized for less, \$50. All licenses expire on the 31st May each year at midnight and must be renewed before expiry.

Location of claims: Mineral claims are rectangular, not over 1500 feet square, and after staking must be recorded within 15 days at the nearest mining recording office for the mining division in which the claims are located, an extra day being allowed for every 10 miles travelled to the recording office, in addition to the first 10 miles from the office. Seven claims can be located, in addition to the first claim staked—total eight claims, within a distance of 10 miles of the first claim staked, but others can be purchased. This is within a period of twelve months. Only one placer claim is allowed on any creek or hill and not more than two in the same locality of which one must be a creek claim. No discovery claim privileges allowed, except in case of new placer mining ground.

Holding Claims: To hold claims, work to the value of \$100, same to be recorded each year and maintenance of miners certificate. When work to the extent of \$500 has been performed a Crown grant can be obtained.

Size of Placer Claims: Creek claims are 250 feet long and 1000 feet wide, 500 feet on each side of the stream. Bar diggings, between high and low water marks, 250 feet square on a bar covered at high water, or a strip 250 feet long at highwater, extending between high and extreme low water mark. Dry Diggings, over which water never extends, 250 ft. square. Claims are recorded similar to lode claims.

Work on Placer Claims: Work must be continuous on a placer claim during working hours. Discontinuance for

seven days, except in close season lay over, leave of absence or sickness or other reason satisfactory to the Gold Commissioner, is deemed abandonment. Claim must be again recorded before the expiry of each year if it is to be held for more than one year.

Leasing Placer Ground: Placer lease holds can be staked by holder of Miners certificate. Application must be made within 60 days to Gold Commissioner of the district, accompanied by a fee of \$20, which will be refunded if lease is not granted. If granted it will be applied to the first years rental. Maximum areas of lease holds, rentals and development conditions are:—Ordinary lease not over half a mile long, annual rental \$30, development work to the value of \$250 each year. Annual rentals must be paid and development recorded during current year or lease forfeited. Excess work for three years may be recorded in advance. Payment of cash in lieu of work is also allowed.

Co-owners and partnerships:—Provision is made for partnerships. Should a co-owenr fail to contribute his proportion of the required development work he may be advertised out and his interest vested in the co-partners who have made the required pro rata expenditures according to their interests. If a co-owner permits his mining certificate to lapse, title of associates is not prejudiced but his interest reverts to them.

Special Assistance from Mines Dept. Assistance is rendered miners by the provision of reports on areas and prospects of interest, the construction of trails, roads and bridges to facilitate the operation and development of lode or placer mining properties. There are five mining engineers and four associate mining engineers under the supervision of a chief mining engineer who devote their whole time in aiding prospectors by furnishing such advice, information and directions that may be of value to them, by examining and testing mineral samples and advising as to same: by reporting to the Minister of Mines as to such roads, trails and bridges that may be desir-

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able for the development of the mineral resources. Miners are also allowed a rebate of 25% on the legitimate retail cost of powder used in bona fide prospecting of any mine. Other assistance is rendered in the form of bounties on pig iron, steel, etc. Free determinations or tests, of mineral specimens; lectures on practical geology and mineralogy.

Coal:—Land under licence for the purpose of prospecting for coal, petroleum or natural gas can be obtained. Unreserved Crown lands, if unsurveyed must be staked under the Coal and Petroleum Act; notice of publication advertised for four weeks in the Official Gazette and local newspaper and application must be made to the Land Commissioner within 60 days of first publication in the Gazette, accompanied by a fee of \$100. Area if surveyed need not be staked. Area must not exceed 640 acres. Application may be refused at the discretion of Minister of Lands if in public interest to do so. Licenses can not be transferred without the Ministers consent. Licenses are renewable each year for three years, annual renewal fee being \$100. Work each year to value of \$50 must be done, includes cost of survey. Land upon which coal has been discovered during existence of license or within 30 days after expiration of license, land having been surveyed and license conditions fulfilled, may be leased for five years at rental of 15c an acre, subject to renewals for five successive periods of three years each—renewal fee being \$100 on each lease. Where lessees show doing of continuous work and reasonable expenditures made for development, and fulfillment of the provisions of the lease, the property can be acquired by purchase at \$20 per acre where surface is available, or \$15 per acre for undersurface rights where surface is not available. Lands under the sea may be purchased at \$15 per acre.

PEACE RIVER ROAD BOTTLENECK

A bottleneck exists on the Peace River Highway at the Mirror Landing near Smith. This is caused by the fact that the ferry across the Slave River at that point is inadequate to

carry the traffic now using the road. There is an easy solution in the feasibility of using the railway bridge at this point to cross the river. During the flood times, many used the bridge to cross over and perhaps arrangements could be made with the railway authorities to permit controlled motor traffic to use it again. Road connection with the bridge could be provided at little cost and the bridge, if decked, could carry the traffic.

ALL READY TO GO FOR SUMMER SEASON

Arrangements are well in hand for the efficient handling of Northern Freight by the Hudson Bay Company's fleet of modern vessels which each year ply the waters of the North.

After the usual winter layup, boats have been overhauled, replaced in the water and are now loading the first of the season freight at Waterways, where the railway terminates and water freighting commences.

A busy season is expected, state company officials in view of the tremendous increase in northern activity as compared with previous years.

The north is fortunate in having an already well established system of water transportation fully manned by efficient river pilots, skippers and crew. These boats are most modern as regards passenger equipment, having not only ample and up to date cabin accommodation with bathing facilities, but also have cold storage units so that it is possible to serve the best of meals on the long trip down to the Arctic.

Boats call at all points going north, both on the Upper River between Waterways and Fort Fitzgerald and also on the lower river between Fort Smith and the Arctic.

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RUBBER . . . SYNTHETIC OR NATURAL

By J. L. IRWIN

(Continued from our last issue.)

Chemically speaking, synthetic rubber is superior to real in its ability to withstand the hazards of heat, cold and moisture. On the other hand, from a mechanical standpoint real rubber is slightly superior in the matter of elasticity and in other ways.

The present rubber situation may be summed up briefly by the statement of certain hard facts. Practically all of the world's supply of 1½ million tons per annum was lost to the United Nations in the first three months of 1942. About two thirds or around a million tons of a year's output was imported to the United States in 1941 and at the present time possibly a year's supply of natural rubber is all that remains awaiting manufacture. The greatest portion of this, needless to say, will be reserved for war purposes. When it is disposed of, the success of the substitutes to follow will be anxiously awaited.

In the meantime it must be obvious to everyone that manufactured articles for civilian use containing rubber will from now on be conspicuous by their absence, and that civilization for the time being must resign itself to whatever substitutes may be available.

Neoprene is perhaps the best amongst the synthetics. It is derived from chlorine, a Du Pont product, imported into Canada on a resale basis to the rubber companies.

A definite demand for neoprene arises from its ability to resist corrosion from oil, resulting in its use in linings for oil and gasoline hose, rubber belting and certain parts of aeroplane construction. It is said, however, that manufacture of this type of synthetic rubber in Canada on a mass production basis would prove too costly.

Since the question of synthetic rubber has come to the fore, many inventions and processes have been mentioned in magazines and the press. Amongst them were two which offered great claims. One, a product of petroleum, gas, air and soap, was described in the May number of the American Magazine, and the other, published by the Canadian Press on May 1st was stated to be procured from natural gas, grain and either woodpulp or coal.

Production of the all-important butadiene gas, now so urgently in demand, can also be

secured from alcohol, recovered from wheat. Against the argument that the wheat process may be too expensive is the fact that it can be produced in half the time which the petroleum recoveries would necessitate. Time just now, is the essence of the agreement, and the general question of economics, profit and loss, and other considerations of a peacetime commercial world are relegated to the background for the duration.

Secretary of Agriculture Wickard of the United States was quoted recently by the New York Times as saying, with regard to the wheat process, that it "offers the best possibility of greatly increasing the production of synthetic rubber as early as this year." He claimed that 20,000,000 bushels of grain would produce 200,000,000 gallons of alcohol from which butadiene, in sufficient quantities to make 240,000 tons of synthetic rubber, could be obtained.

A stalwart advocate for such development comes in the presence of the dynamic Dorothy Thompson, whose article, published by the Canadian Press on May 27th, 1942, concludes as follows:—

Price of Time

And how long will it take to make this rubber . . . ? (referring to the petroleum process). Two years at least. Maybe three.

And what's the price of time? Our life as a nation.

And must rubber be made from oil No.

For months leading chemists of both Britain and America have called attention to the fact that rubber can be made from something that we, the people, own in vast quantities: grain.

We own tens of millions of tons of it, stored in Mr. Wallace's over-normal granary. And, say these chemists, this grain can be turned into rubber in from ten to twelve months and even without creating new factories, if the American people will go without whisky and give us the distilleries.

This isn't a new prohibition movement; it's a necessity of war.

Too Expensive

What are the arguments against it? "Grain is too expensive".

Listen, this grain costs exactly zero. It is worthless unless used. "Shortage of copper for adjustments in distilleries". But I am

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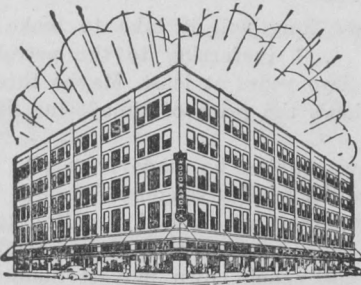
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told we can use silver, and silver we have in immense quantities. "Too expensive".

Listen, the value of the silver to the American people is also zero. We bought it. We own it, and unless used it is worthless. And, anyhow, we will still have it.

I don't know whether we have enough gold to build a pipe line from Texas, but if we do, that would be a good way to use it. It's now good buried in ingots in Kentucky. Only a job of reburial in another form.

If we are going to survive this epoch we have got to do some imaginative thinking, and stop letting people whose brains have grown dull on monopoly do it for us.

Other vitally important angles in the present rubber crisis are those of conservation and salvage. On May 27th the Canadian Press reported the Innisfail, Alberta public school as instituting a two weeks drive for the purpose of salvaging old rubber.

At the end of that time the school basement contained nearly 600 old tires, dozens of tubes, hundreds of rubbers, rubber boots, rain capes, hot water bottles and other rubber articles. A half holiday, in return for the recovery of all this material, now of such high value, was very properly awarded to the school.

It is impossible to give too much publicity to this particular incident. The story should be told over Canada and the example of this school followed by every community in the land. No rubber article can be too small or insignificant. It is the grand total of what can be saved for use again which is going to count.

With reference to the varying expert opinions regarding a speedy settlement of the rubber problems, certain startling and naked truths present themselves. About 97 per cent of the world's natural rubber supply was lost to the United Nations in the first three months of 1942. Britain, it is thought, possesses little if any surplus stocks on hand. The United States is in possession of possibly a year's supply. When this has gone, synthetic rubber, added to whatever sources of natural rubber supply we can draw upon, must step into the breach.

There is not much time—but we can solve the problem if we are sufficiently determined. One well-known writer, commenting on the situation, concludes by saying that if we do not soon stop talking about what can be done, and get into immediate and definite action, the war may quite easily be lost on this point alone.

While admitting that huge and costly plants are being constructed for the recovery of butadiene from petroleum and in this connection it is well to remember that Alberta, which produced 98.08 per cent of Canada's oil last year, can play a major part—the problem cannot possibly be solved by this alone.

Every other angle must also be explored, tested, and, wherever found to be in any way feasible and satisfactory, worked to the limit. Several processes, whether related to each other or not, can be operated at the same time. A small production here, a large one there, a medium one somewhere else. The objective is rubber—in the greatest quantity it is possible to secure—and in the least possible time.

It is to be sincerely hoped that from now on, instead of paying farmers a bonus for not growing wheat, the situation may be drastically reversed—also, that whatever part wheat starch may be able to play in the speedy production of synthetic rubber will be pushed to the limit.

Production of buna -S from petroleum will no doubt eventually become the recognized form of process, as opposed to recoveries from wheat starch. Wheat starch, however, must take first place in importance just now as an urgent war measure, for rubber can be produced from it in from 6 to 9 months as compared with 12 to 18 months from petroleum. The two major costs regarding wheat are already provided for—we have the surplus wheat and Canada is generously equipped with distilleries in which it can be processed. If we don't use our tremendous wheat surplus soon, it will burn and we shall lose it. A speedy solution for the rubber shortage problem lies at our very door. Cost, large or small, fades from the picture just now. Time is the only consideration.

It is to be hoped that if this year's experiments in Western Canada with the kok-sagyz plant prove to be satisfactory, next year will see a new crop in the Canadian West; a crop which bearing 27 per cent of natural rubber in its roots, can cover vast areas of our agricultural lands.

Again it is to be hoped that conservation of rubber will become the sternest duty of every member of our civilian population; and that salvage of old rubber, in any form, and on the magnificent and encouraging scale of the Innisfail school, may be practised in every sector if the Dominion. No offering must be considered too small or inconsequential. It will be the grand total which will count.

CORRECTION . . .

In suggesting the feasibility of the extension of the Peace River Highway west from Spirit River to Dawson Creek, we inadvertently described it as going via Peace River and the North bank of the Peace. It should have been from Edmonton to High Prairie and following the existing

highway to Spirit River — distance from Edmonton 388 miles — Spirit River to Pouce Coupe distance is 60 miles. This road is a well built dirt road which truckers claim is free from heavy grades. This route shortens the distance from Edmonton to Dawson Creek by 100 miles on the round trip.



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OIL IN POUCE COUPE

Take a line N.W. and S.E. along the eastern escarpment of the Rocky Mountains, between Fort Norman and the Mexican Oil fields and that line will cut The West Texas oil fields, Pan Handle oil fields. Greasewood oil fields, Salt Creek oil fields. Cut Bank and Montana fields, Turner Valley, Pouce Coupe, Norman. This means that the known gas and potential oil areas of the Peace River block are directly in line with this natural oil flow.

The most notable instance of drilling activity in the Pouce Coupe Field was the bringing in of the N. W. Co's well at Pouce Coupe some years ago. It had a tremendous flow of natural gas. It was capped at the time of coming in but in 1936 blew out around the casing and caught fire with a roar that could be heard for miles. It was finally recapped in 1937. The estimated flow of gas was placed at 60,000,000 cubic feet per day, this was from 5 gas sand areas struck in drilling.

A deal of mystery has always surrounded this well. At the time drill-

ing occurred, it was stated that oil and gas were struck in a sand 40 feet in thickness and only 180 feet below the surface. The quantity of the oil discovered in this sand was never revealed. At 1673 feet in depth the well was drilled into a gas sand making 10 million cubic feet daily. This flow increased until at 1800 feet there was a measured flow of 33 million cubic feet per day. Special equipment had to be obtained to drill past this flow. During the time the well was shut down, gasoline forced its way through the casing joints. Drilling proceeded and at 2000, 2370 & 2733 feet more gas sands were encountered making a total gas flow of around 60 million cubic feet daily. In the spring of 1923, the well was abandoned at 3,057 feet.

Pouce Coupe is well situated for oil marketing. The opening of the Alaska Highway has created an immediate demand. Pouce Coupe is 7 miles from Dawson Creek. It is only 430 miles from Pouce Coupe to Bella Coola, B.C., where there is an excellent harbour and an oil line over the Monkman Pass, would have an elevation of only 3550 feet.

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ALBERTA SHOULD RESENT THIS

Alberta taxpayers should resent the idea of our Minister of Highways proceeding to Washington for the reported purpose of asking Uncle Sam to assist, either with money or machinery, the building of Alberta's roads connecting with the Alaska Highway.

Surely our Allies have shown that they are right on the spot when the need has arisen and why cannot Alberta at least do its part in providing

the necessary connections with the Alaska Highway out of the huge sums collected each year ostensibly for road building and extension.

In the past much publicity has been given to the present Governments superior road building methods, including much up to date new machinery which has been purchased for building roads quicker and cheaper than old governments could do the work. Where is all this machinery? Surely it is available.

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BRITISH COLUMBIA AND THE ALASKA HIGHWAY

The most remarkable feature in connection with the location of the Alaska Highway is the fact that whilst practically the whole of this important road, runs as far as Canada is concerned, through British Columbia and the Yukon, there is no connection, excepting by Edmonton and Alberta for the Pacific Coastal towns and cities.

Whilst Edmonton and Alberta are sitting pretty as regards the business which must result from development along this route in future years, everyone must admit that British Columbia coastal points are entitled to direct connection and will without a doubt obtain such.

The British Columbia Government, it is stated, will have four survey parties in the field this season making a reconnaissance of routes from Prince George to Dawson Creek or Fort St. John. It contemplates the expenditure of some \$8,000,000 on building the road as a post war project. Two routes are mentioned, one through the Monkman Pass connecting up with the B. C. highway system at Hansard and the other via Pinchi Lake and Findlay Forks.

Remarkable as it may seem, and acting as a true illustration of how opposing interests have been enabled to offset development, British Columbia did not treat the efforts of Peace River pioneers to get a road over the Monkman Pass some years ago seriously, with the result, that although, these public spirited residents of the Peace contributed both money and work on a voluntary basis towards getting a pioneer road over the Monkman Pass to Hansard, the project failed in its objective. Had that organization had proper assistance from the British Columbia Government of that day, the Pacific Coast would now be connected with the Alaska Highway.

No one in his right senses can ever understand why the Peace River block and the western Peace failed to get road connection with the Pacific coast years ago. Notwithstanding the fact that Edmonton and Alberta have benefited extremely well by the fact that

the gap was allowed to exist, it is obvious that with Vancouver hardly further from the Peace than it is from Edmonton such a connection was both a feasible and economic possibility. Instead of the long haul of grain to Fort William and the East it could have gone to the Pacific seaboard for ocean shipment. Of course it is obvious that railways like the "long haul" and perhaps this had much to do with the failure to connect.

Edmonton and Alberta, as said before, are sitting "pretty" today, but unless time is taken by the forelock to improve the road system from Dawson Creek to the main American highways coming from the East, Edmonton and Alberta are likely to regret such inaction in a very few years. No one from the United States will travel over the Alaska Highway in later years, if it means the negotiation of some hundreds of miles of indifferent main highways across Saskatchewan and Alberta, and when the two governments of Alberta and Saskatchewan remain content to "wait and see" instead of taking all immediate steps possible to clinch the present favorable position, it is time that the taxpayers of both provinces knew without stint the reason why?

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ROAD FROM DAWSON CREEK TO EDMONTON

According to Coastal papers, negotiations are under way between the Governments of Canada, United States and Alberta to construct a connecting highway from Dawson Creek to Edmonton. It appears as if this refers to the extension of the Whitecourt Road to Grande Prairie and Dawson Creek. Advices state that a decision on the matter is imminent, pointing out that if such is made British Columbia will have missed connecting up with the midnight sun for a second time in two years.

It appears from the reports that Ottawa is taking the stand "Its not our job". The Hon. Mr. Fallow, minister of Highways for the Province of Alberta is quoted as stating "We have no money" and in addition the road would run through undeveloped territory and so should be regarded as a war measure. Therefore the report adds, it looks as if it is up to "Uncle Sam" to do it.

The report states that Mr. Fallow now has a "prairie reputation" as a highway builder, and evidently he has no qualms in taking credit for this, in addition to the location of the Alaska Highway.

However, facts are facts, and even road builders should face facts. When Mr. Fallow states he has no money to build such a road, why did he start building the Whitecourt extension a few years ago? Can he truthfully suggest that Alberta has no money for building such a road when it means so much to development of Alberta? Will he dare to suggest that putting a road through "undeveloped" country will not redound to the benefit of Alberta after the illustration he has had of the building of the Alaska Highway from Dawson Creek to Fairbanks?

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"Jim", said one of them, "the defense program is speeding every thing up, but you still talk as slow as ever."

"Well", said Jim, "If-you-think-I-talk-slow-you-should-hear-my-Secretary. She-had-a-date-the-other-night-and-her-boy-parked-on-the-way-home. And-before-she-could-say-I'm-not-that-kind-of-a-girl . . . She was.

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HYDROPONICS

Hydroponics is the raising of plants in water to which fertilizing chemicals have been added.

First experiment—early in 1840 by French chemist Jean Boussignoult.

Wm. F. Gericke—Assistant professor of Plant Physiology of the University of California—first person to suggest and start commercial use of hydroponics. (About 1930).

Function—

1. Roots of plants have free access to solution and have to exert very little energy in expanding. Extra energy thereby saved devoted to attaining larger fruits or flowers and bigger growth.

2. The quality of food products are improved and mineralized. (i.e. Dr. Charles Northen of Orlando, Florida grew celery which when analyzed showed twice the mineral content of the best grown elsewhere)

3. Food can be grown nearly anywhere and all the year around. (i.e. The Pan American Airways which crosses the Pacific established tanks at Wake Island and furnished passengers with fresh vegetables. The Soviets were said to have raised fresh vegetables from hydroponics tanks while stationed at the North Pole, to prevent scurvy.

4. Diseases and pests can be better controlled.

5. Out of season crops can be grown in hot houses.

6. There is less manual labour (no

plow and hoe or constantly changing of soil in the greenhouse.)

7. Cost of chemicals less than adding fertilizer to soil (28 lbs. chemical were needed for growing 1,280 lbs. of tomatoes according to Dr. Gericke's experiments. \$1.00 per month is the cost of chemicals for 800 plants.)

8. No rotation of crops necessary.

1. Dr. Gericke's experiments prove larger yields can be attained than from average soil. At Montebello, California, Ernest Brundin raised 24,000 tomato plants per tank acre.

2. Hydroponics offers a way of evading the vagaries of nature such as droughts, sandstorms, windstorms and floods, so that our food supplies will not be interfered with. This is important at this time when there is a war on and where there is a shortage of farm labour.

As long as the country possesses the minerals needed by plants in large quantities there need be no shortage of vegetables and fruit and grains to maintain the health of the population at any time of the year.

It appears that the greenhouse industry may be revolutionized by the use of hydroponics in growing plants.

"The greatest factor affecting yield in the soil is an insufficient amount of nutrients. Soils in greenhouses may not be in soil condition but the plant food materials will be available if they are supplied. In hydroponics there is no problem".

—Total War and Defence Bulletin.

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NEW AIRPORT ADMINISTRATION BUILDING

Edmonton's new airport administration building fills a long-felt want. The airport, now one of the finest and best equipped on the continent, stood in need of just such a nerve centre for its growing operations.

The main rotunda, with large windows facing the airport so that all can see activities outside, is particularly easy on the eye with its simple beauty. The marble floor is set off by a coloured marble compass in the centre, with the needle pointing to true north and south.

A wooden staircase and mazzanine floor balcony guard in natural colour sets off the rotunda. The balcony slats have V for victory insignia on them. Ceiling of the rotunda is a checker-board of buff and light brown with modernistic light drops.

Ticket offices are on either side of the rotunda, on the right that of Trans-Canada Air Lines and on the left Canadian Pacific Airlines. Corridors open from each side of the rotunda leading to offices of Trans-Canada Air Lines, rooms for pilots and stewardesses and offices of the North West Staging Route. To the left Canadian Pacific Air Lines have office space as well as considerable room on the second floor. There is also a post office for sorting air mail and an office for Canadian customs and immigration.

A feature of the ground floor is a compact restaurant and kitchen, which is operated by a railway restaurant company.

Loud speakers in most parts of the building will tell of the arrival and take-off of planes.

Captain James Bell, airport manager, has an office on the second floor. Much of this floor is taken up by the Department of Transport. Here are meteorological offices, etc.

A radio range station is located on the roof and there is also a cubicle for the release of balloons filled with hydrogen. Planes travelling within a wide range are given their bearings from here. The latest in control towers tops the building.

Since Edmonton's airport, the first

commercial airdrome licensed as such by the Dominion Government, officially started its career in 1928, development has been rapid. In that year the number of airplanes operating out of Edmonton was three. The number of men working at the airport was three.

The port had one hangar, an old shed-like structure built in 1920 and torn down in 1930.

The city now has two hangars, No. 1 built in 1930 and No. 2 finished in 1938. In addition there is a T. C. A. hangar, besides many other buildings at No. 2 Air Observer School and Aircraft Repair Limited, which are located at the airport. There are several hundred landings and take-offs every day. In addition to this airport, Edmonton has a seaplane base on the Saskatchewan River and at South Cooking Lake.

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CARIBOU MEAT

Meat rationing has appeared in Canada's war effort. No doubt a necessary step in looking after war and relief requirement, but Ottawa might consider the feasibility of replacing beef, mutton and pork with caribou meat. Millions of caribou roam the northlands—in fact in such vast numbers as to permit the taking of a few hundred thousand for meat purposes, without making a serious dent in the remaining number. These animals are easily caught, and could be shipped out without difficulty during the winter months over the Grimshaw-Great Slave Lake road.

Of course there will be a cry of horror from the authorities at Ottawa who have an idea that the caribou and other northern game must be reserved for the few remaining Indians resident in the North West Territories. With the present and coming development of the North—the finding of ranging lands adequate to take care of the countless numbers will be difficult, so the taking of them at the present time to help out the meat shortage seems to be a good step towards future care of the herds.

NORTHERN FISH

Great Slave Lake, Great Bear Lake and numerous smaller northern lakes teem with all kinds of fish. None of them have ever been fished excepting only for local use. Great Slave Lake whitefish are superb in flavor, so are the lake trout. The lake has an area of 12,000 square miles of virgin fishing waters. The commencement of commercial fishing in this and other northern lakes simply awaits the O.K. of the authorities at Ottawa. Attempts have been made to get permission to establish commercial fisheries on the lake but there seems to be a hitch somewhere as although ample capital is said to be available, no start has yet been made. This fish can be brought out during the winter months over the winter road.

* * *

The kid was on the rampage, women and booze. Pa admonished him.

Son asked, "Father, which would you advise me to quit?" "Well, son", responded the old'un, "You can drink after you are 70".

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"She should be. She's been in four engagements already."

* * *

"Do you object to petting?"

"That's one thing I've never done yet."

"Petted?"

"No; objected."

* * *

Al gazed at the crib containing the new born babe, his face was wreathed in rapture.

"A penny for your thoughts", asked his wife.

Al, "I cannot see how anyone can make a crib like that for \$3.79 and make any money."

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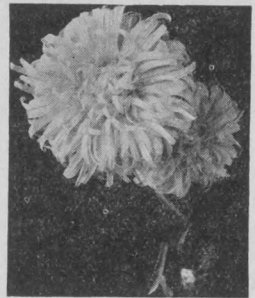
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